

PAGE 7:

Line 8, delete "in the";
Line 14, change "roll" to --roller--;
Line 20, change "roll" to --roller--;
Line 24, insert --a-- before "solder";

PAGE 8:

Line 1, delete "in the";

PAGE 9:

Line 9, delete ",";
Line 22, delete "of", second occurrence;

PAGE 10:

Line 3, delete "in the";

PAGE 11:

Line 23, delete "in the above";

PAGE 12:

Line 8, change "noncircuular" to --noncircular--.

IN THE CLAIMS:

Amend claims 4-5 by rewriting them in amended form as follows:

4. (Amended) A method for manufacturing [from a large substrate a plurality of] thermal heads, [comprising heaters, driver ICs for providing a drive signal for said heaters, and encapsulation for protecting said ICs] comprising the steps of:

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providing [preparing] a [large] substrate[,] having a first surface, a second surface opposite the first surface, a plurality of heaters disposed on the first surface, and a plurality of pairs of electrodes disposed on the first surface, the electrodes of each pair of electrodes being disposed in spaced-apart, confronting relation [for mounting said driver ICs being laid out thereon symmetrically with respect to separating lines of thermal heads adjacent] to each other;

mounting [said] a driver IC [ICs] on each of the [said] electrodes [for mounting said driver ICs];

encapsulating the driver ICs with a resin [filling with encapsulation resin IC mounting portions of a plurality of thermal heads adjacent to each other on said large substrate];

forming grooves in at least one of the [encapsulation] resin encapsulating the driver ICs [portions] and the second surface of the [back of said] substrate so that the electrodes of each pair of electrodes are disposed symmetrically with respect to one of the grooves; and

cutting the [separating said] substrate along the grooves to form [into] individual thermal heads each having a heater, at least one of the driver ICs for providing a drive signal to drive the heater, and a sealing element formed by the resin for protecting the driver IC [using said grooves].

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5. (Amended) A method for manufacturing [preparing] thermal heads as claimed in claim 4[,]; wherein the forming [in said] step comprises [of] forming the grooves[, said grooves are formed] only in the second surface [back] of the [said] substrate using a [with] laser scriber [scribing].

Kindly add the following new claims 6-12:

6. A method for manufacturing thermal heads, comprising the steps of: providing a substrate having a first surface, a second surface opposite the first surface, a plurality of electrodes disposed on the first surface, and a plurality of pairs of heaters disposed on the first surface so that the heaters of each pair of heaters are disposed in confronting, spaced-apart relation to one another; mounting integrated circuits on the electrodes to provide a plurality of pairs of integrated circuits so that the integrated circuits of each pair are disposed in confronting, spaced-apart relation to one another; encapsulating the integrated circuits with a resin; forming grooves in one of the first and second surfaces of the substrate to provide a plurality of groups of separating lines so that each of the separating lines of one of the groups is disposed between a respective pair of heaters and each of the separating lines of another of the groups is disposed between a respective pair of integrated circuits; and cutting

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the substrate along the separating lines formed by the grooves to provide individual thermal heads each having a heater, at least one of the integrated circuits for providing a drive signal to drive the heater, and a sealing element formed by the resin for protecting the integrated circuit.

7. A method for manufacturing thermal heads as claimed in claim 6; wherein the forming step comprises forming the grooves only in the second surface of the substrate using a laser scribe.

8. A method for manufacturing a thermal head, comprising the steps of: providing a substrate having a peripheral edge, a heater, and a driver IC for providing a drive signal to drive the heater; and disposing a protective sealing element over the IC so that at least a part of the protective sealing element has a surface portion contiguous with the peripheral edge of the substrate.

9. A method as claimed in claim 8; wherein the disposing step includes disposing the protective sealing element so that the surface portion thereof is cliff-shaped and has a height in the range of 0.1 mm to 1.5 mm.

10. A method as claimed in claim 9; wherein the disposing step includes disposing the protective sealing

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element so that the cliff-shaped surface portion of the protective sealing element does not protrude over the peripheral edge of the substrate.

11. A method as claimed in claim 8; wherein the disposing step includes disposing the protective sealing element so that the surface portion thereof is flat.

12. A method for manufacturing a thermal head, comprising the steps of: providing a substrate having a main surface bounded by a peripheral edge; forming an electrode on the main surface of the substrate; disposing a heater on the main surface of the substrate; electrically connecting the heater to the electrode; disposing a driver IC on the main surface of the substrate; electrically connecting the driver IC to the electrode for providing a drive signal to drive the heater; and disposing an encapsulation element over the IC for protecting the IC so that the encapsulation element has a surface portion extending to the peripheral edge of the substrate.

IN THE ABSTRACT:

Delete the abstract now of record and insert therefor the new abstract submitted herewith on a separate sheet.